

9. (amended) A diagnostic magnetic resonance imaging method for imaging the surroundings of an interventional instrument (1) on which a microcoil is provided for the detection of the magnetic resonance signals, characterized in that a localization method, particularly as claimed in claim 1, is applied alternately with a sequence of RF pulses and gradient pulses that is intended for the imaging, the parameters of the imaging sequence that determine the volume to be imaged (field of view or FOV) being predetermined by the position of the interventional instrument (1) determined by means of the localization method, so that an image is formed of the surroundings of the interventional instrument.

16. (amended) A magnetic resonance system for carrying out the method claimed in claim 1, which system includes at least one coil (17) for generating a uniform, steady magnetic field, a number of gradient coils (18, 19, 20) for generating gradient pulses in different spatial directions, an RF transmission coil (21) for generating RF pulses, at least one control unit (24) for controlling the temporal succession of RF pulses and gradient pulses, a reconstruction unit (25) and a visualization unit (26), and an interventional instrument (1) with at least one microcoil (6) which is connected to a receiving unit (27), characterized in that the control unit (23) is used to generate, via the RF